

Sparta aquifer going downhill fast, panel says
Enduring harm seen in 30 years if groundwater use doesn't fall
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The two critical underground water sources that sustain the billion-dollar farming industry in east Arkansas continue to dwindle as millions of gallons are being pumped each year for irrigation

Scientists now say that the state's deeper water source, the Sparta aquifer, may be irreparably harmed in 30 years if current consumption rates hold or increase, according to a recent report released by the Arkansas Soil and Water Conservation Commission.

That's about five times sooner than once predicted, prompting concern among Arkansas officials in charge of conserving the state's natural resources.

"The fact we continue to see declines in those aquifers at these rates tells me we've really got to be thinking about the future," said Randy Young, the commission's executive director.

Already, the alluvial aquifer is in jeopardy of going dry by 2015, according to federal scientists. It has more storage capacity than the Sparta and is the primary source for irrigation across the fertile Delta and Grand Prairie region.

As a result of the alluvial aquifer's decline, many farmers are forced to dig deeper wells and tap into the Sparta. Since 1985, use of the Sparta has increased almost 70 percent - from 157 million gallons a day to 265 million gallons a day.

"That's a trend that scares me," said Todd Fugitt, geology supervisor for the commission's groundwater section.

Fugitt said it likely would take years before the aquifers could replenish themselves and even then the water quality would never be the same.

As a result, farming would suffer, and municipalities and utilities would have to find new ways to augment their supplies.

"There already is an impact to the natural flow of the area, but at some point you're talking about an adverse economic impact," Fugitt said.

Arkansas' two major aquifers, however, were given a slight reprieve in 2002 because of sufficient rainfall across the eastern third of the state. Water levels in both rose

slightly.

Demand upon the aquifers, however, continues to increase, as more than 7.3 million gallons of water a day were pumped in 2001- up from 6.9 million gallons a day in 1999.

That substantial demand places Arkansas fourth in the nation in terms of groundwater withdrawals, behind California, Texas and Nebraska. About 98 percent of all water wells drilled in Arkansas are used for irrigation, making farmers the largest user group for groundwater resources.

When studied over a long period of time, the aquifers show significant declines. More than 75 percent of wells drilled within those aquifers show declines from 1997-2002.

The only real exception is south-central Arkansas, where aquifer levels are stable, and in some cases, actually increasing.

In Union County, the hub of industrial activity in south Arkansas, water use has decreased by 60 percent from 1985 to 2001. Conversely, water levels went up an average of 3.2 feet from 2001 to 2002. The dramatic turnaround is the result of county residents' decision to tax themselves for their water use, prompting many to cut back their intake. At one time, the U.S. Geological Survey said the county must decrease its water use by 72 percent - about 14 million gallons of water a day - to sustain the Sparta aquifer, the county's sole source of drinking and industry water.

Since then, Union County residents have approved two local taxes on water users that will ultimately finance a \$45 million pipeline to the Ouachita River to supply water to four major industries.

"They've done a very good job down there with just conservation and education efforts," said Jim Battreal, the senior geologist with the commission.

Declines within the Sparta were much more significant in other parts of the state, particularly the Grand Prairie, which includes Arkansas, Lonoke, Prairie, Jefferson and parts of White and Pulaski counties.

For example, between 1997 and 2002, water levels declined an average of 13 feet. Arkansas County's levels dropped an average of 15.8 feet, while Jefferson County's drop averaged 15 feet.

Jefferson County residents consumed 90 million gallons of water a day in 2000,

making it the thirstiest county within the Sparta aquifer. International Paper Inc.'s plant typically uses about 10 percent of that amount, more Sparta water than any other single source.

Geologists have said that the Grand Prairie region needs to decrease its water use by 20 percent to sustain both the alluvial and Sparta aquifers.

"Personally, I think that is a very conservative number," Fugitt said.

State conservation officials have pinpointed two ways to stop the depletion of groundwater resources - either change the way people use their land or tap into surface water supplies.

For now, the state is proposing to solve the water crises in eastern Arkansas by tapping into the White River to deliver irrigation water to roughly 1,000 farmers on the Grand Prairie.

Many farmers don't want to foot the bill for the \$319 million project, while others see it as the only salvation for their crops.

Conservationists fear the project would ruin the White River, which supports two national wildlife refuges. Those refuges are home to the largest population of wintering mallards in North America and the state's only native population of black bears.

David Carruth, a Clarendon lawyer and an outspoken critic of the irrigation project, said the groundwater report illustrates the need for conservation practices to slow the aquifer decline - not for diverting surface water.

"The bottom line is we are having a detrimental impact on these aquifers," he said. "Now the responsible thing to do is to ask what do we do to reverse that trend."

A bill pending before the Legislature would amend the 1991 Groundwater Protection and Management Act, the state's most recent attempt to legislatively curtail aquifer depletion.

Sponsored by Rep. Jay Bradford, D-White Hall, House Bill 2505 lifts some of the limitations placed upon the Soil and Water Conservation Commission in regard to regulating water withdrawals in "critical groundwater areas." There are two such areas, the six-county Grand Prairie region and a five-county south Arkansas area.

As it stands, many wells - commercial, domestic and irrigation - within these areas are

"grandfathered," which means the wells are allowed to escape regulations that arose after the wells were established.

Bradford confirmed Friday that the bill is targeted at International Paper, the largest groundwater user within the Sparta.

"The desire of the sponsor is to take some pressure off the aquifer in Jefferson County," he said. "And it's a matter of public record that the biggest user is the paper mill. They are a good corporate citizen, but we have to resolve this issue nonetheless."

Bradford said he plans on amending the bill to exempt farmers as well as utilities from future regulations

A spokesman for International Paper said that the company had no comment on the bill until it had seen the amended version.